Software Requirements Specification (SRS) for E-commerce Platform

1. Introduction

1.1 Purpose of the Document

The Software Requirements Specification (SRS) for the development of an online e-commerce platform. The platform aims to provide users with a seamless and secure shopping experience.

1.2 Scope of the Project

The project involves the development of a user-friendly, secure, and efficient online platform where customers can browse, select, and purchase products. The system will support features such as user registration, product browsing, shopping cart management, checkout, multiple payment methods, order confirmation, and customer feedback.

2. Requirements Analysis

2.1 Problem Statement

The problem to be addressed is the absence of a convenient and secure online platform for customers to browse and purchase products.

3. Functional Specification

3.1 User Registration and Management

The system shall allow users to register, log in, and manage their profiles. User profiles should include personal information, order history, and preferences.

3.2 Product Browsing

Users should be able to browse products by category, search for specific products, and view detailed product information.

3.3 Shopping Cart Management

The system should enable users to add products to a shopping cart, modify the cart contents, and proceed to checkout.

3.4 Payment Methods

Support for multiple payment methods, including credit cards, checks, and other related options, should be implemented securely.

3.5 Order Confirmation and Shipping Updates

Customers should receive order confirmation and real-time shipping status updates.

3.6 Customer Feedback

The platform should allow customers to provide feedback on products and services they have purchased.

4. External Interface Specification

4.1 User Interface

The website should have a clean, intuitive, and responsive design using React, ensuring compatibility with various devices and screen sizes.

4.2 Communication Protocols

The system requires an internet connection for users to access the website securely via HTTPS.

4.3 Hardware Interfaces

The platform should be compatible with various devices (desktops, laptops, tablets, smartphones) and support various operating systems, RAM, and hard disk configurations.

4.4 Database Backend

The system shall use MongoDB as the database backend to store and manage user data, product data, and transaction data securely.

5. Technical Specification

5.1 Performance Constraints

The system should handle high traffic, and load times should be minimal (<3s) to ensure a smooth user experience.

5.2 Memory/OS/Hardware Optimization

The system should be optimized for memory usage and compatible with various operating systems and hardware configurations.

6. Conclusion

This Software Requirements Specification outlines the necessary features and technical specifications for the development of an e-commerce platform. The goal is to create a robust, user-friendly, and efficient system that meets the needs of customers while ensuring security and scalability.